



Firmware/Software Release Note

Date: Dec 2021

Distribution: Public

Reference: MU320E-2021-1

MU320 Extended Configurator

v 4.1.1 - Dec 2021

Key new features

- None

Other new features

- None

Notable defect fixes

- Fixed the configuration converter (Update CID or in the Firmware Update) to not remove datasets with FCD or structured data.

Firmware compatibility

- MU320 firmware versions 04AXX.

Upgrade procedure

- If there already is a MU320 Extended Configurator installed, it must be removed before installation of the new version.
- Upgrading to MU320 Extended Configurator can be done by executing “bin\setup.exe”, after extracting the “MU320E-configurator.install-4.1.1.zip” file.

v 4.1.0 - Dec 2021

Key new features

- Analog Monitoring
Added support to monitor the signals parameters (magnitude and phase) for each electrical signal (voltage and current) connected to the available analog channels. When the value is under 5% and the channel is selected as “In Use”, the measure is highlighted in ORANGE.



Analog Monitoring - □ ×

Show secondary values

Slot G - Board P1					Slot H - Board ME				
Voltage Nominal		115 V			Voltage Nominal		115 V		
Current Nominal		1 A			Current Nominal		1 A		
Phasor	In Use	Primary	Phase	Quality	Phasor	In Use	Primary	Phase	Quality
I1	<input checked="" type="checkbox"/>	2.06 A	155.55°	OK	I1	<input checked="" type="checkbox"/>	0.27 A	76.43°	OK
I2	<input checked="" type="checkbox"/>	0.62 A			I2	<input checked="" type="checkbox"/>	0.26 A	101.25°	OK
I3	<input checked="" type="checkbox"/>	2.59 A			I3	<input checked="" type="checkbox"/>	0.29 A	121.8°	OK
IN	<input checked="" type="checkbox"/>	0.31 A			IN	<input checked="" type="checkbox"/>	0.11 A	83.72°	OK
V1	<input checked="" type="checkbox"/>	242.03 V			V1	<input checked="" type="checkbox"/>	215.57523 kV	25.95°	OK
V2	<input checked="" type="checkbox"/>	34.47 V			V2	<input checked="" type="checkbox"/>	51.64 V	103.9°	OK
V3	<input checked="" type="checkbox"/>	24.66 V			V3	<input checked="" type="checkbox"/>	19.24 V	111.18°	OK
VN	<input checked="" type="checkbox"/>	49.59 V	87.85°	OK	VN	<input checked="" type="checkbox"/>	79.84 V	-66.56°	OK

Quality Details
 Validity: Good
 Overflow: 0
 Out of Range: 0
 Bad Reference: 0
 Oscillatory: 0
 Failure: 0
 Old Data: 0
 Inconsistent: 0
 Inaccurate: 0
 Source: Process
 Test: False
 Operator Blocked: 0

For each monitored and used analog channel, the user will see the validity field of its quality attribute. When Validity equals VALID, then the text is highlighted in GREEN, otherwise for QUESTIONABLE and INVALID the text is highlighted in ORANGE. Out of range is never displayed here.

Data are updated each 5 seconds.

- **Binary Monitoring**

Added support to verify the current state of each available Binary Event (Input/Output and GOOSE) and see the MU/LD Mode/Behavior status and Simulation State. Data are updated each 5 seconds.

Binary Inputs



Binary Monitoring

Mode/Behavior		Simulated Messages	
Mode	Behavior	Status	
BASE	On	Receive Simulated GOOSE Message	False
CTRL	On		


Binary Inputs | Binary Outputs | GOOSE Inputs

Slot C - Board B3

Label	Status
Aldus	OFF
teste_2	OFF
C_3	OFF
_C4	OFF
_C4	OFF
C6	OFF
Ind7	OFF
Ind8	OFF
Ind9	OFF
Ind10	OFF
Ind11	OFF
Ind12	OFF
Ind13	OFF
Ind14	OFF
Ind15	OFF
Ind16	OFF

Slot D - Board B4

Label	Status
Ind17	OFF
Ind18	OFF
Ind19	OFF
Ind20	OFF
Ind21	OFF
Ind22	OFF



Binary Outputs


Binary Monitoring

Mode/Behavior		Simulated Messages	
Mode	Behavior	Status	
BASE	On	Receive Simulated GOOSE Message	False
CTRL	On		

Binary Inputs | Binary Outputs | GOOSE Inputs

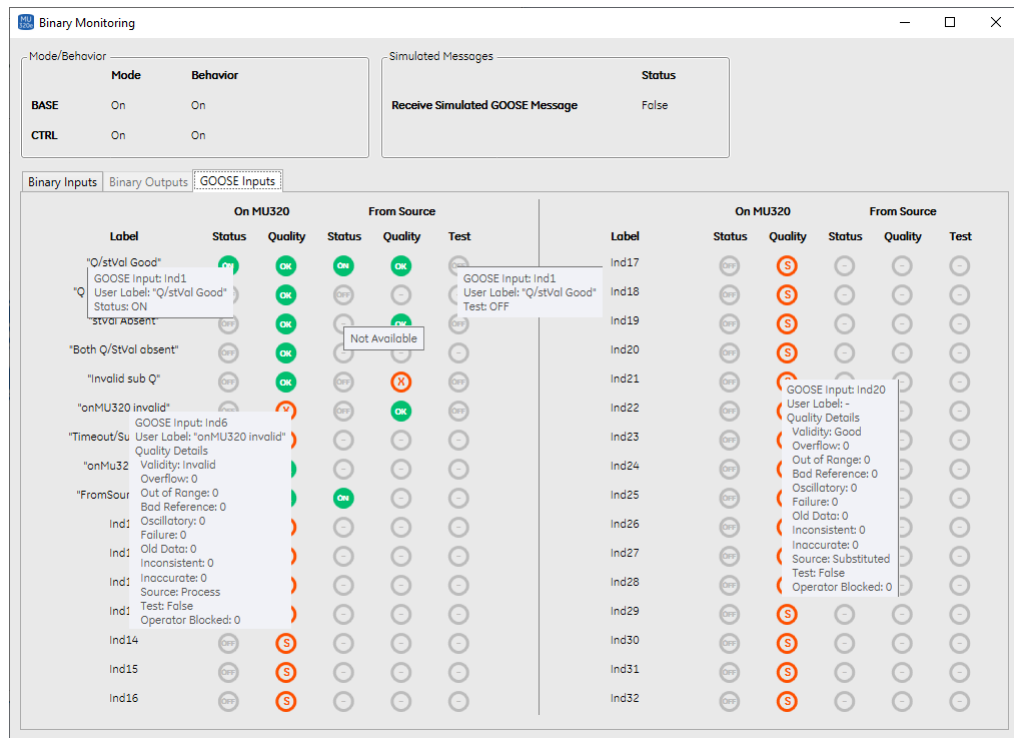
Slot D - Board B4

Label	Status
_d_1	ON
D_2	OFF
Ind21	OFF
Ind22	OFF
Ind23	OFF
Ind24	OFF

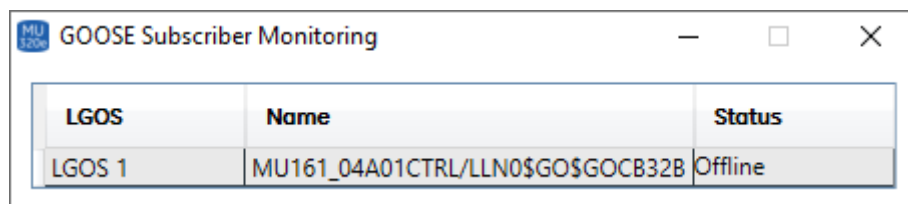


GOOSE Inputs



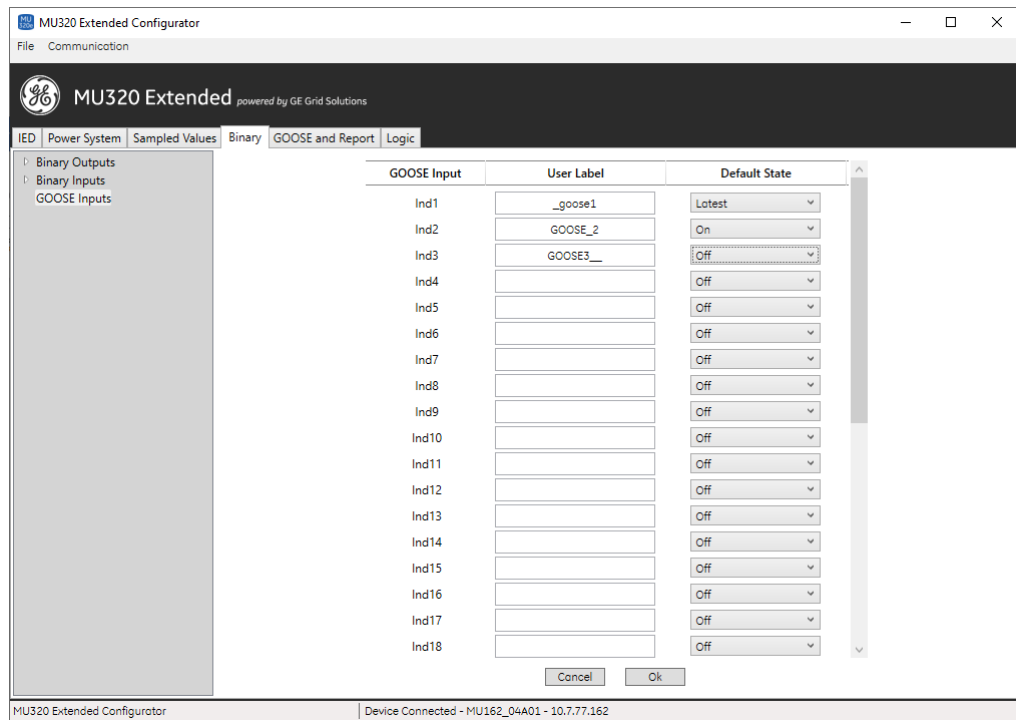


- **GOOSE Subscriber monitoring**
Allows user to see if the IED is receiving messages from a subscribed GOOSE Publisher. Data are updated each 30 seconds



- **GOOSE Inputs - Default State definition**
Allows user to define the default status of a GOOSE Input in absence of the respectively GOOSE message.



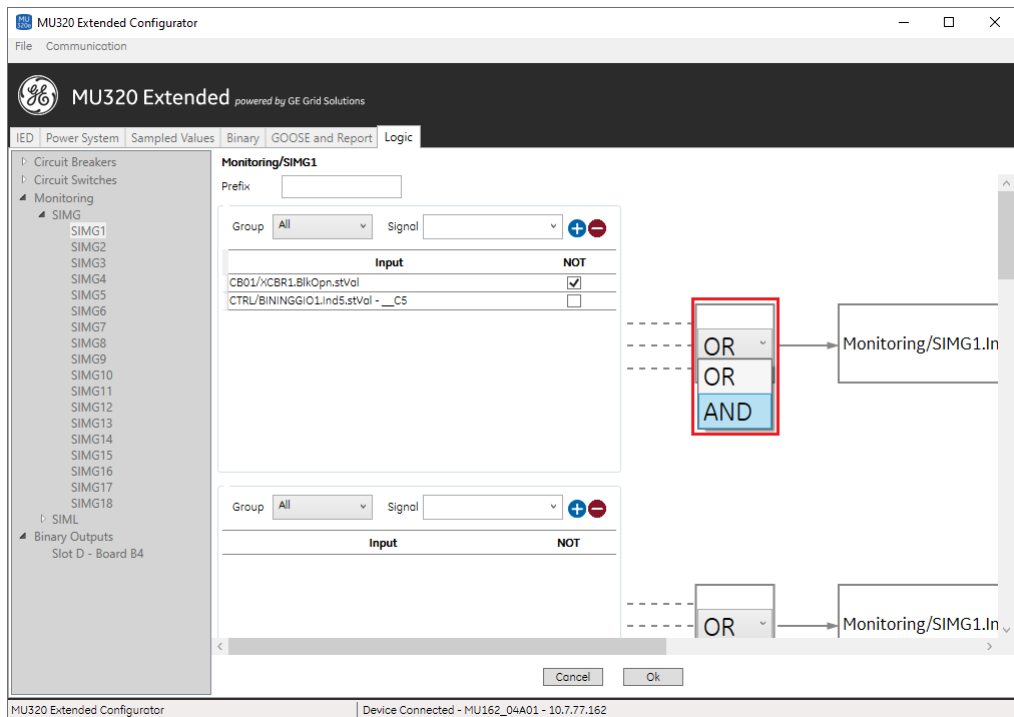


- With ON default value selected, in the absence of GOOSE Messages, then the Related GOOSE Input shall be set to ON disregarding of its current state.
- With OFF default value selected, in the absence of GOOSE Messages, then the Related GOOSE Input shall be set to OFF disregarding of its current state.
- With LATEST default value selected, in the absence of GOOSE Messages, then the Related GOOSE Input shall not change its state, following the latest received state from the subscribed GOOSE Message.

For users who migrate from older firmware version to 04A01, the default state of the GOOSE input will remain “**Latest**”. New configurations will have the GOOSE default state “**Off**” as standard.

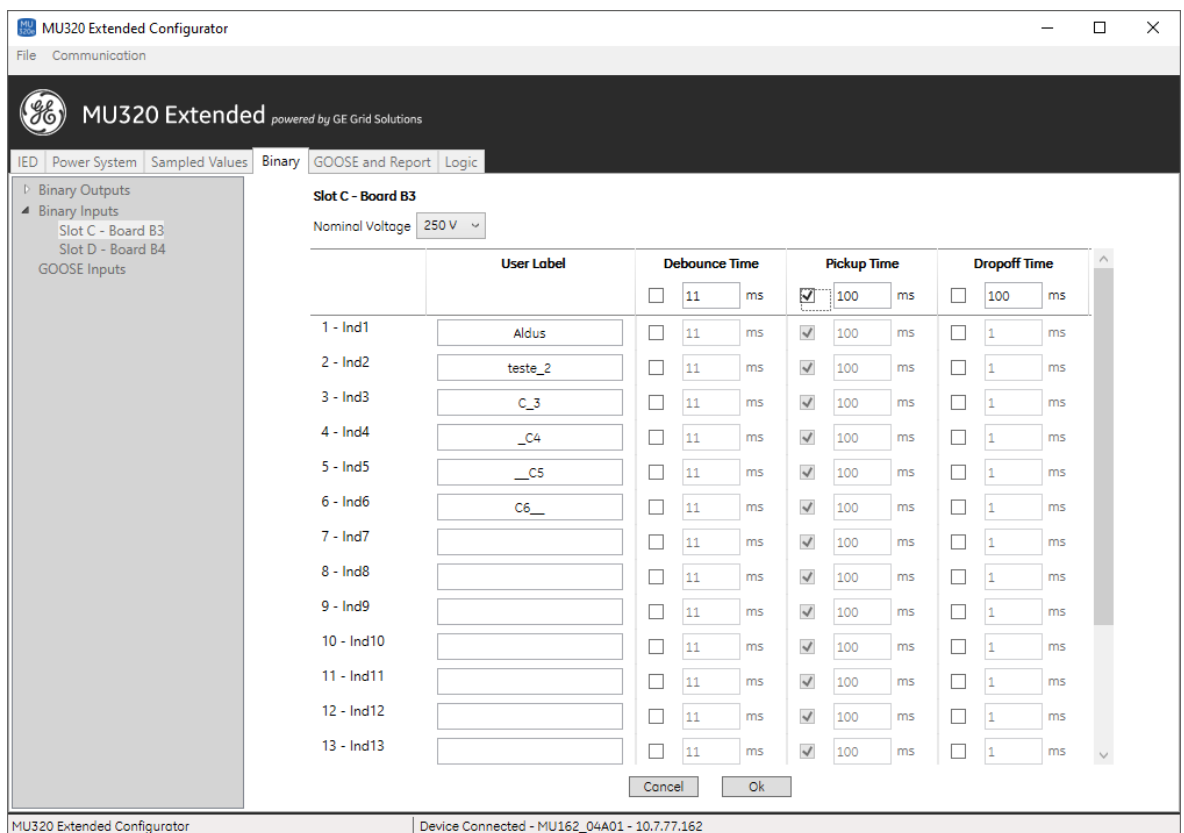
- Logic - Possibility to Change from OR to AND
Allows user to change the logical OR gate to a logical AND gate to associate binary information for controlling Circuit Breakers, Circuits Switches, Monitoring and Binary Outputs.





- **Binary Input Setting - Timer Configuration**

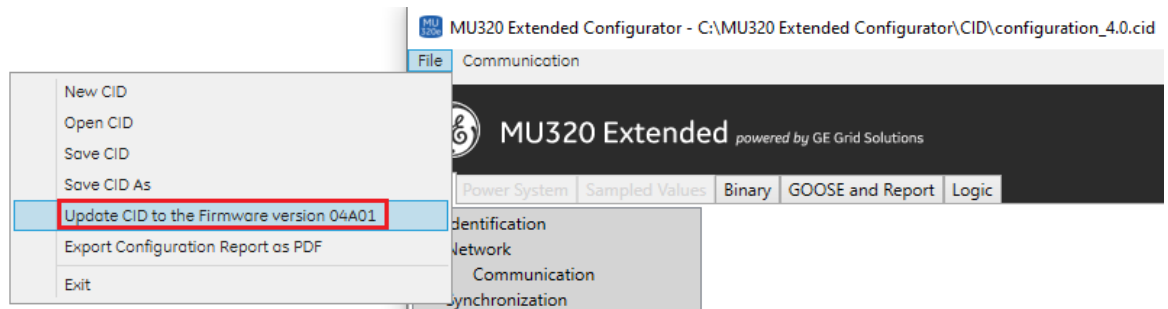
Allows to set timers (debounce, pickup and dropoff) for each binary input available. It is possible to enable or disable all debounce, pickup and dropoff timers separately. When timer is enabled, the global value is applied for all inputs.



- Debounce timer is used to validate a binary change specially on noisy channels. This timer can be set from 1ms to 1s with steps of 1ms.

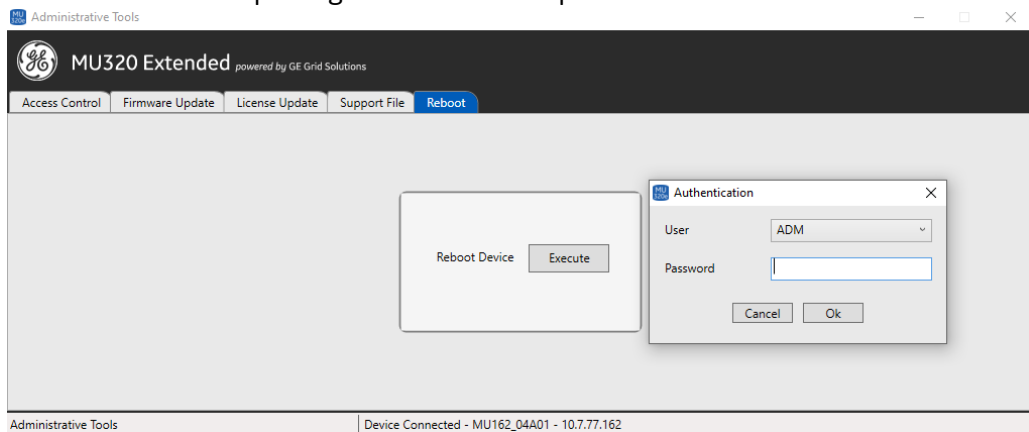


- Pickup timer is used to delay the validation of a binary change from OFF to ON. This timer can be set from 1ms to 60s with steps of 1ms.
- Dropoff timer is used to delay the validation of a binary change from ON to OFF. This timer can be set from 1ms to 60s with steps of 1ms.
- Upgrade offline configuration
Allows update a local configuration for the latest FW version that software has compatibility.



This option will be only enabled to configurations compatible with the Firmware version 04A00 (Configuration version 6.0). The configuration will be updated to be compatible with the Firmware version 04A01 (Configuration version 6.1).

- Hardware Reboot
Allows user requests a reboot operation to the IED from the Administrative Tools Interface. User need has administrative privilege to be able to request reboot IED.



- I/O Event Log Registering
Allows user to see on the log list, every change on all available physical binary Input and/or Output on the IED.



Log window showing Identification: IED Name MU162_04A01, IP Address 10.7.77.162. Filters: Period All, Codes empty. Classes: Binary Inputs and Outputs checked, GOOSE, Sampled Values, Communication, IED Status, Configuration, Synchronization, Firmware Update unchecked. Timestamp Difference: Time ---, Events ---. General: Auto Refresh checked, Refresh, Download, Clear Log buttons. Table with columns: Event ID, Timestamp, Code, Description. Total Events: 628.

Event ID	Timestamp	Code	Description
2727	OCT 02 2021 17:46:24.937	L702	Binary output changed its value: [index: 17; status: on; name: _d_1]
2694	OCT 02 2021 17:46:24.905	L701	Binary input changed its value: [index: 32; status: on; name: Ind32]
2693	OCT 02 2021 17:46:24.904	L701	Binary input changed its value: [index: 31; status: on; name: Ind31]
2692	OCT 02 2021 17:46:24.903	L701	Binary input changed its value: [index: 30; status: on; name: Ind30]
2691	OCT 02 2021 17:46:24.902	L701	Binary input changed its value: [index: 29; status: on; name: Ind29]
2690	OCT 02 2021 17:46:24.901	L701	Binary input changed its value: [index: 28; status: on; name: Ind28]
2689	OCT 02 2021 17:46:24.900	L701	Binary input changed its value: [index: 27; status: on; name: Ind27]
2688	OCT 02 2021 17:46:24.899	L701	Binary input changed its value: [index: 26; status: on; name: Ind26]
2687	OCT 02 2021 17:46:24.898	L701	Binary input changed its value: [index: 25; status: on; name: Ind25]
2685	OCT 02 2021 17:46:24.896	L701	Binary input changed its value: [index: 24; status: on; name: Ind24]
2684	OCT 02 2021 17:46:24.895	L701	Binary input changed its value: [index: 23; status: on; name: Ind23]
2642	OCT 01 2021 12:16:41.582	L701	Binary input changed its value: [index: 32; status: on; name: Ind32]
2641	OCT 01 2021 12:16:41.581	L701	Binary input changed its value: [index: 31; status: on; name: Ind31]
2640	OCT 01 2021 12:16:41.581	L701	Binary input changed its value: [index: 30; status: on; name: Ind30]
2639	OCT 01 2021 12:16:41.580	L701	Binary input changed its value: [index: 29; status: on; name: Ind29]
2638	OCT 01 2021 12:16:41.579	L701	Binary input changed its value: [index: 28; status: on; name: Ind28]

- GOOSE Message Event Registering
Allows user to see on the log list, every change on all GOOSE entries (received and published values).

Log window showing Identification: IED Name MU162_04A01, IP Address 10.7.77.162. Filters: Period All, Codes empty. Classes: Binary Inputs and Outputs, IED Status unchecked; GOOSE checked; Sampled Values, Communication, Configuration, Synchronization, Firmware Update unchecked. Timestamp Difference: Time ---, Events ---. General: Auto Refresh checked, Refresh, Download, Clear Log buttons. Table with columns: Event ID, Timestamp, Code, Description. Total Events: 736.

Event ID	Timestamp	Code	Description
2726	OCT 02 2021 17:46:24.936	L706	GOOSE subscribed input [name: Ind32] changed quality from [validity: good; quality: 0x0] to [validity: good; quality: 0x20]
2725	OCT 02 2021 17:46:24.936	L706	GOOSE subscribed input [name: Ind31] changed quality from [validity: good; quality: 0x0] to [validity: good; quality: 0x20]
2724	OCT 02 2021 17:46:24.935	L706	GOOSE subscribed input [name: Ind30] changed quality from [validity: good; quality: 0x0] to [validity: good; quality: 0x20]
2723	OCT 02 2021 17:46:24.934	L706	GOOSE subscribed input [name: Ind29] changed quality from [validity: good; quality: 0x0] to [validity: good; quality: 0x20]
2722	OCT 02 2021 17:46:24.933	L706	GOOSE subscribed input [name: Ind28] changed quality from [validity: good; quality: 0x0] to [validity: good; quality: 0x20]
2721	OCT 02 2021 17:46:24.932	L706	GOOSE subscribed input [name: Ind27] changed quality from [validity: good; quality: 0x0] to [validity: good; quality: 0x20]
2720	OCT 02 2021 17:46:24.931	L706	GOOSE subscribed input [name: Ind26] changed quality from [validity: good; quality: 0x0] to [validity: good; quality: 0x20]
2719	OCT 02 2021 17:46:24.930	L706	GOOSE subscribed input [name: Ind25] changed quality from [validity: good; quality: 0x0] to [validity: good; quality: 0x20]
2718	OCT 02 2021 17:46:24.929	L706	GOOSE subscribed input [name: Ind24] changed quality from [validity: good; quality: 0x0] to [validity: good; quality: 0x20]
2717	OCT 02 2021 17:46:24.928	L706	GOOSE subscribed input [name: Ind23] changed quality from [validity: good; quality: 0x0] to [validity: good; quality: 0x20]
2716	OCT 02 2021 17:46:24.927	L706	GOOSE subscribed input [name: Ind22] changed quality from [validity: good; quality: 0x0] to [validity: good; quality: 0x20]
2715	OCT 02 2021 17:46:24.926	L706	GOOSE subscribed input [name: Ind21] changed quality from [validity: good; quality: 0x0] to [validity: good; quality: 0x20]
2714	OCT 02 2021 17:46:24.925	L706	GOOSE subscribed input [name: Ind20] changed quality from [validity: good; quality: 0x0] to [validity: good; quality: 0x20]
2713	OCT 02 2021 17:46:24.924	L706	GOOSE subscribed input [name: Ind19] changed quality from [validity: good; quality: 0x0] to [validity: good; quality: 0x20]
2712	OCT 02 2021 17:46:24.923	L706	GOOSE subscribed input [name: Ind18] changed quality from [validity: good; quality: 0x0] to [validity: good; quality: 0x20]
2711	OCT 02 2021 17:46:24.922	L706	GOOSE subscribed input [name: Ind17] changed quality from [validity: good; quality: 0x0] to [validity: good; quality: 0x20]

- Event Log Registering
Added the Event ID on the registers list.



Log

Identification

IED Name MU162_04A01
IP Address 10.7.77.162

Filters

Period All Codes

Classes Binary Inputs and Outputs GOOSE Sampled Values Communication
 IED Status Configuration Synchronization Firmware Update Clear All Selection

Timestamp Difference

Time --- Events ---

General Auto Refresh Refresh Download Clear Log

Event ID	Timestamp	Code	Description
2734	OCT 04 2021 22:46:39.363	L500	Procedure to receive configuration: [ok]
2733	OCT 04 2021 22:30:52.187	L500	Procedure to receive configuration: [ok]
2732	OCT 04 2021 10:45:25.642	L500	Procedure to receive configuration: [ok]
2731	OCT 02 2021 17:47:42.136	L101	PhyHealth: [ok; cause: Instrument reestablished]
2730	OCT 02 2021 17:47:42.000	L400	Time synch: [kind: global; grandmaster: c4b512ffe00010b; source: PTP]
2729	OCT 02 2021 17:47:25.002	L200	Ethernet link: [interface: 2; status: on]
2728	OCT 02 2021 17:47:25.001	L200	Ethernet link: [interface: 1; status: on]
2727	OCT 02 2021 17:46:24.937	L702	Binary output changed its value: [index: 17; status: on; name: _d_1]
2726	OCT 02 2021 17:46:24.936	L706	GOOSE subscribed input [name: Ind32] changed quality from [validity: good; quality: 0x0] to [validity: goc
2725	OCT 02 2021 17:46:24.936	L706	GOOSE subscribed input [name: Ind31] changed quality from [validity: good; quality: 0x0] to [validity: goc
2724	OCT 02 2021 17:46:24.935	L706	GOOSE subscribed input [name: Ind30] changed quality from [validity: good; quality: 0x0] to [validity: goc
2723	OCT 02 2021 17:46:24.934	L706	GOOSE subscribed input [name: Ind29] changed quality from [validity: good; quality: 0x0] to [validity: goc
2722	OCT 02 2021 17:46:24.933	L706	GOOSE subscribed input [name: Ind28] changed quality from [validity: good; quality: 0x0] to [validity: goc
2721	OCT 02 2021 17:46:24.932	L706	GOOSE subscribed input [name: Ind27] changed quality from [validity: good; quality: 0x0] to [validity: goc
2720	OCT 02 2021 17:46:24.931	L706	GOOSE subscribed input [name: Ind26] changed quality from [validity: good; quality: 0x0] to [validity: goc

Total Events: 2000

- The Event ID is unique and incremented monotonically (from 0 to 10000) for each new registered event. The after 10000 registers, the oldest 5000 registers are removed.
- The newest registered events are displayed on top of the list by default.
- The interface displays up to 2000 events in the window.
- The interface shows the total events displayed on the status bar.

• Event Log Sorting

Added support to sorting data by the event ID in ascending and descending order.

Log

Identification

IED Name MU162_04A01
IP Address 10.7.77.162

Filters

Period All Codes

Classes Binary Inputs and Outputs GOOSE Sampled Values Communication
 IED Status Configuration Synchronization Firmware Update Clear All Selection

Timestamp Difference

Time --- Events ---

General Auto Refresh Refresh Download Clear Log

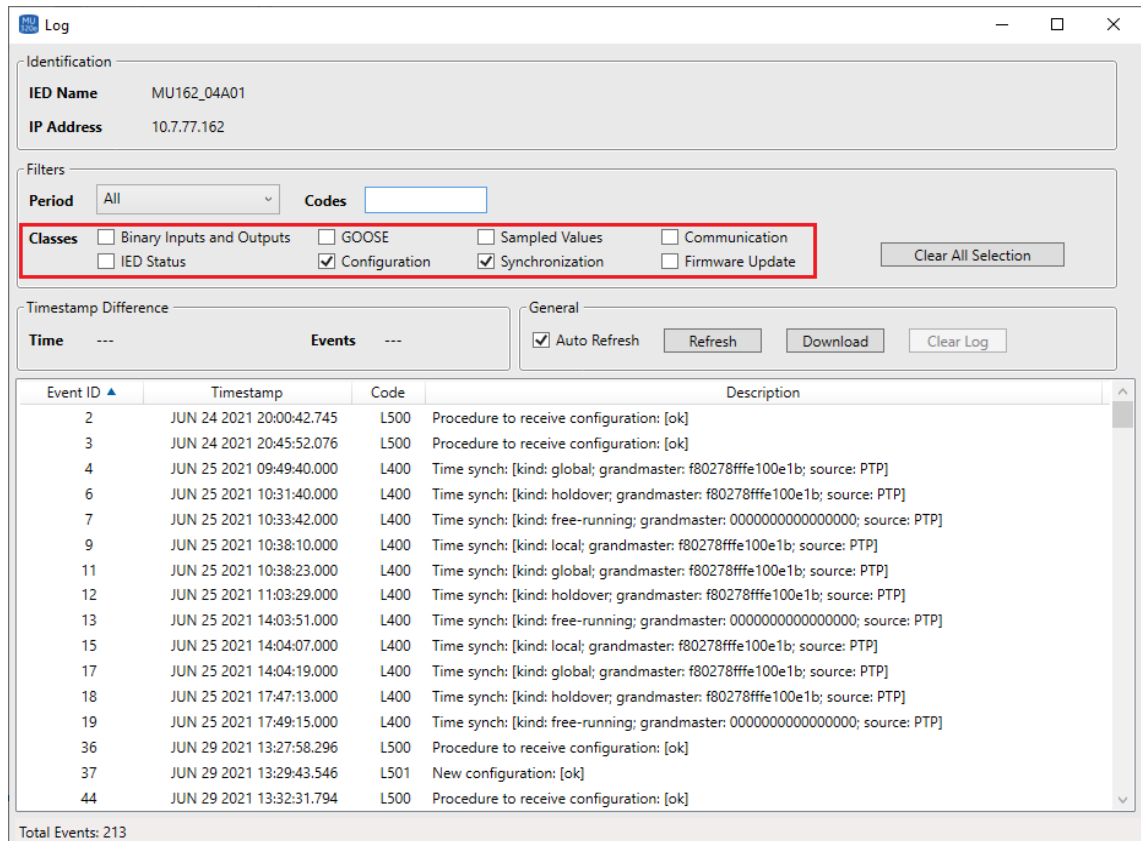
Event ID	Timestamp	Code	Description
1	JUN 24 2021 13:11:39.827	L507	ICT requested log cleanup.
2	JUN 24 2021 20:00:42.745	L500	Procedure to receive configuration: [ok]
3	JUN 24 2021 20:45:52.076	L500	Procedure to receive configuration: [ok]
4	JUN 25 2021 09:49:40.000	L400	Time synch: [kind: global; grandmaster: f80278ffe100e1b; source: PTP]
5	JUN 25 2021 09:49:40.138	L101	PhyHealth: [ok; cause: Instrument reestablished]
6	JUN 25 2021 10:31:40.000	L400	Time synch: [kind: holdover; grandmaster: f80278ffe100e1b; source: PTP]
7	JUN 25 2021 10:33:42.000	L400	Time synch: [kind: free-running; grandmaster: 0000000000000000; source: PTP]
8	JUN 25 2021 10:33:42.138	L101	PhyHealth: [warning; cause: Synch quality]
9	JUN 25 2021 10:38:10.000	L400	Time synch: [kind: local; grandmaster: f80278ffe100e1b; source: PTP]
10	JUN 25 2021 10:38:10.138	L101	PhyHealth: [ok; cause: Instrument reestablished]
11	JUN 25 2021 10:38:23.000	L400	Time synch: [kind: global; grandmaster: f80278ffe100e1b; source: PTP]
12	JUN 25 2021 11:03:29.000	L400	Time synch: [kind: holdover; grandmaster: f80278ffe100e1b; source: PTP]
13	JUN 25 2021 14:03:51.000	L400	Time synch: [kind: free-running; grandmaster: 0000000000000000; source: PTP]
14	JUN 25 2021 14:03:51.138	L101	PhyHealth: [warning; cause: Synch quality]
15	JUN 25 2021 14:04:07.000	L400	Time synch: [kind: local; grandmaster: f80278ffe100e1b; source: PTP]
16	JUN 25 2021 14:04:07.138	L101	PhyHealth: [ok; cause: Instrument reestablished]

Total Events: 2000



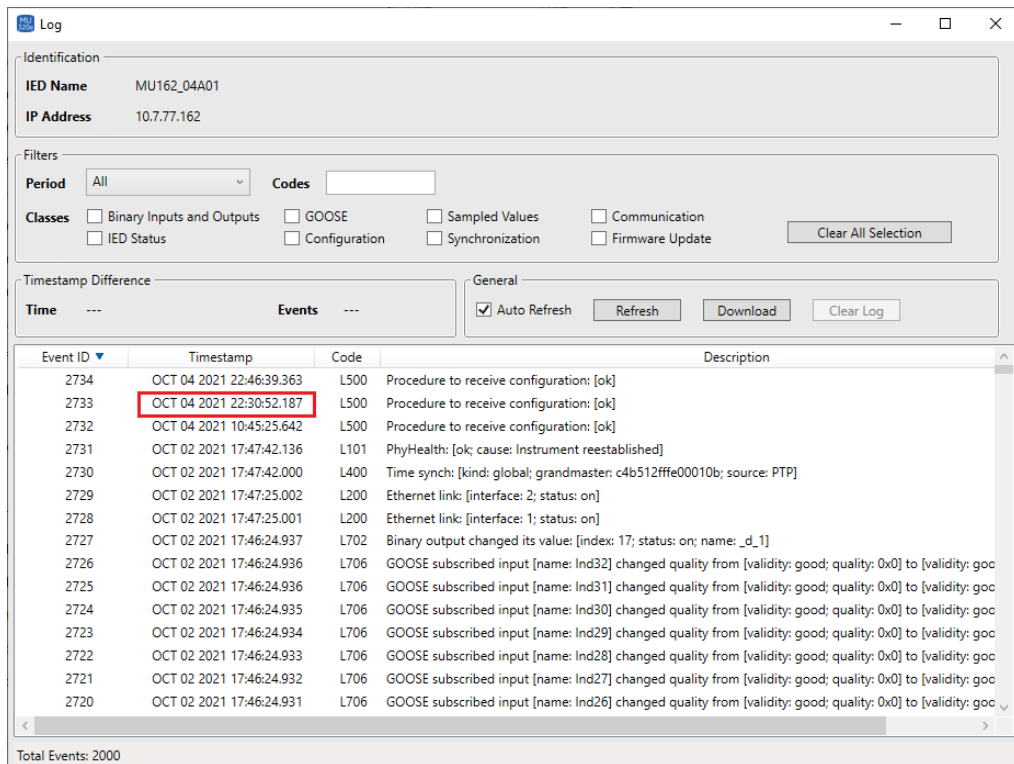
The sorting mechanism is applied to all "filtered" items (Period, Codes and Classes) and after that the interface will show up to 2000 events.

- **Event Log Filtering**
Added support to filter registers by up to 8 classes. It is possible to clear all classes selection through the "Clear All Selection" button.

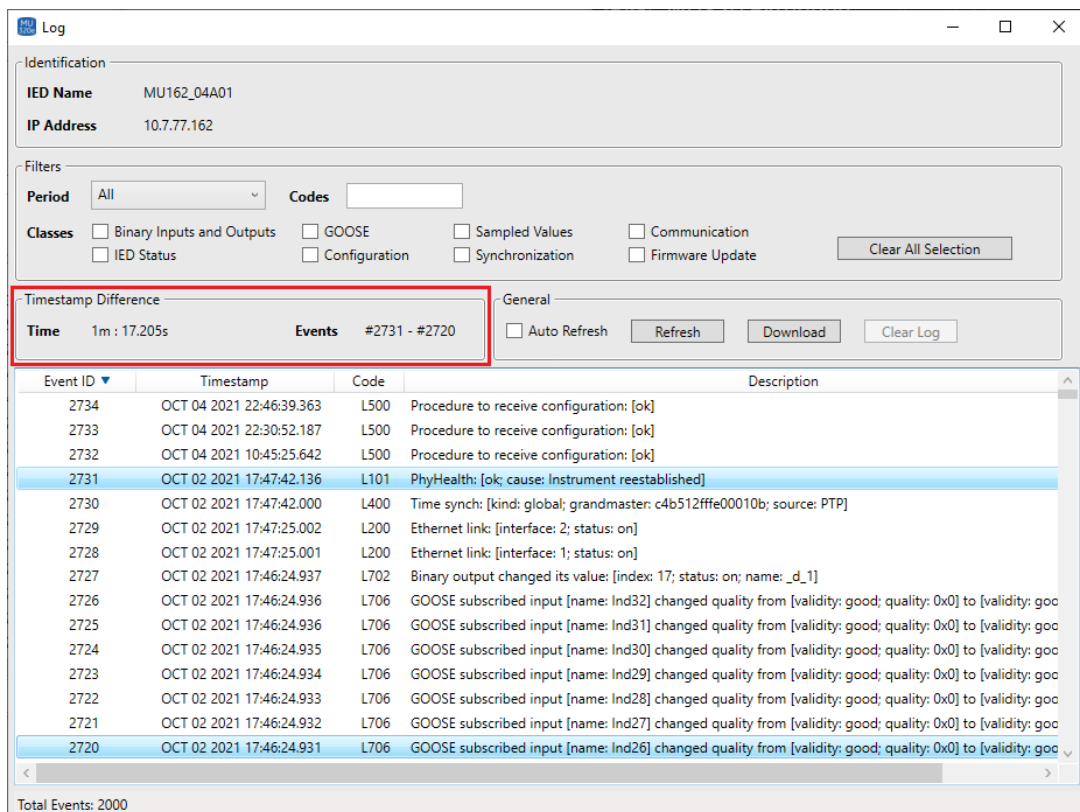


- **Binary Inputs and Outputs:** events related to binary I/O change and actions of binary I/O debounce pickup and dropoff.
 - **GOOSE:** events related to GOOSE inputs change, GOCB status, and GOOSE Subscriber.
 - **Sampled Values:** sample quality and SV control block (profile, SVID, status and mode).
 - **Communication:** Ethernet link, IP address, Gateway and Netmask change, MMS connection status and Ethernet settings reset through loopback.
 - **IED Status:** events related to Power Up, PhyHealth, alarm relay, modules, internal voltage, temperature, passwords reset through loopback, IED reboot and log cleanup.
 - **Configuration:** events of receiving and sending configuration.
 - **Synchronization:** time sync and quality.
 - **Firmware Update:** events related to firmware update.
- **Log - Display Timestamp Format**
Changed the timestamp format displayed on the Log view to "MON DD YYYY HH:MM:SS.FractionOfSecond".





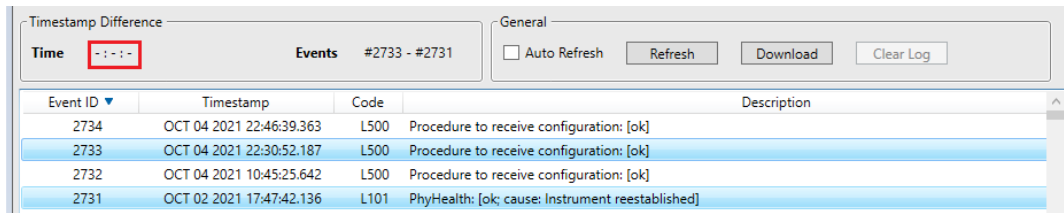
- **Log - Display Timestamp Difference Between Two Events**
User can select two registered events from the log list and see the time stamp difference between them. The time stamp difference is displayed on the "HH:MM:SS.FractionOfSecond" format. The events ID related to time stamp difference are shown on interface.



When the time stamp difference is greater than 1 hour (in absolute value), the ICT shows "- : - : -" on the interface and a message is added in the software log (C:\MU320 Extended



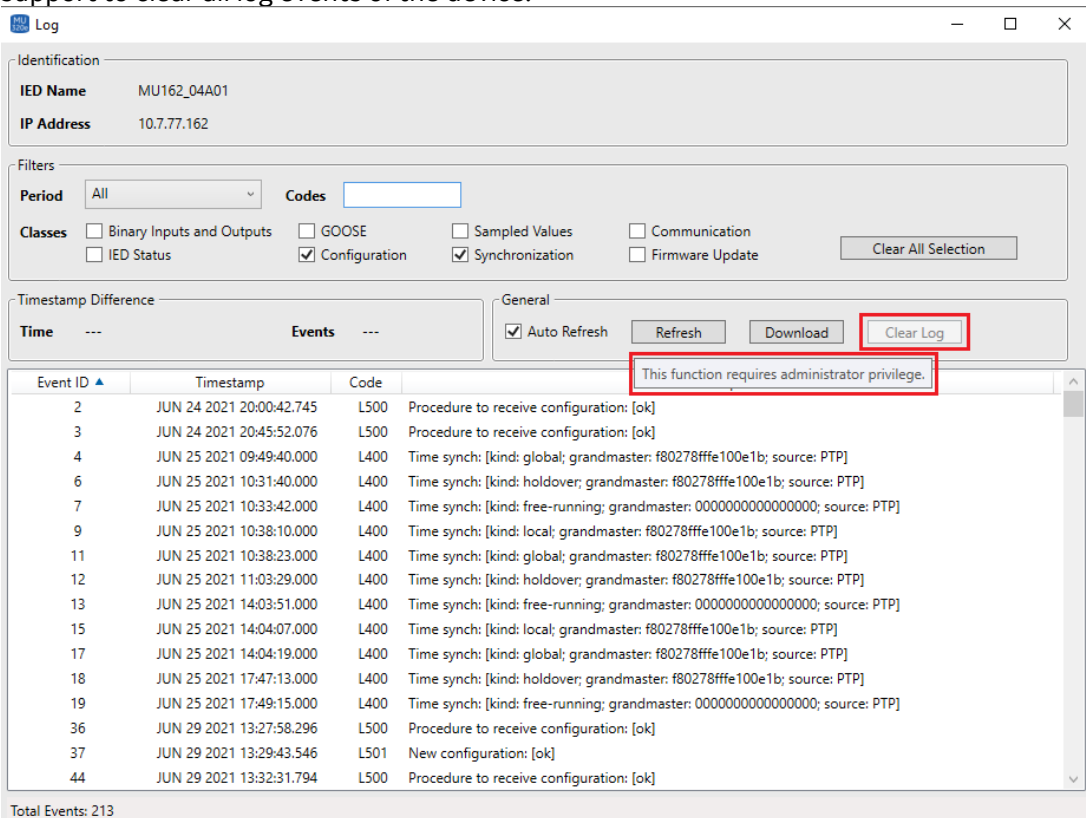
Configurator\logs\logError.log).



- The Log view is always opened with "Auto Refresh" option selected/enabled.
- The "Auto Refresh" button is unchecked when one or two items are selected.
- When "Auto Refresh" option is selected, the events list is updated, and the selected items/events are unselected.
- When "Refresh" button is clicked, the events list is updated, the "Auto Refresh" option is checked, and the selected items/events are unselected.
- It is not allowed select more than two events.
- The timestamp difference is always positive (newest event - oldest event).

- **Clear Log List**

Added support to clear all log events of the device.

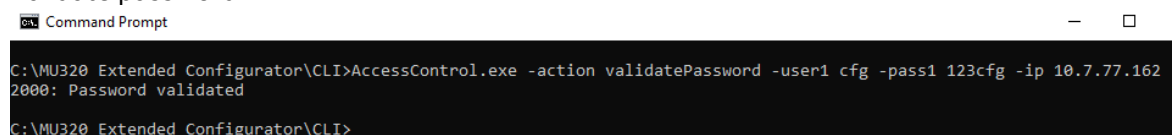


- The "Clear Log" button will be enabled when user is logged as administrator.
- The software will ask user confirms the clear action.

- **Access Control CLI**

Allows execute actions related to control access by command line. There are two actions:

- **Validate password**



Parameter	Definition
<action>	The required action
<user1>	The username which password will be validated
<pass1>	The user's password
<ip>	The device's IP address

- Change password

```

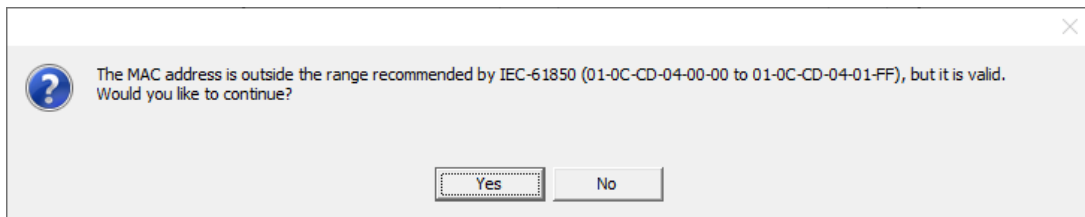
Command Prompt
C:\MU320_Extended_Configurator\CLI>AccessControl.exe -action changePassword -user1 cfg -pass1 123cfg -user2 mon -pass2 123123 -ip 10.7.77.162
1000: Password changed
C:\MU320_Extended_Configurator\CLI>

```

Parameter	Definition
<action>	The required action
<user1>	The username used to connect to device
<pass1>	The password of username which is used to connect to device
<user2>	The username which password will be changed
<pass2>	The new password of <user2>
<ip>	The device's IP address

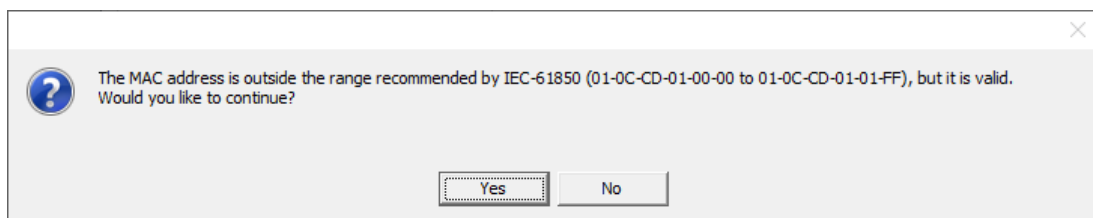
Other new features

- Extend allowed range of SV publisher MAC addresses
User can freely configure all octets. If user configures the MAC address outside of the recommended range by IEC-61850, a message asking the user whether to continue or not is displayed:



If “Yes”, the address is kept on the configuration; if “No”, the edition interface keeps opened to user to change.

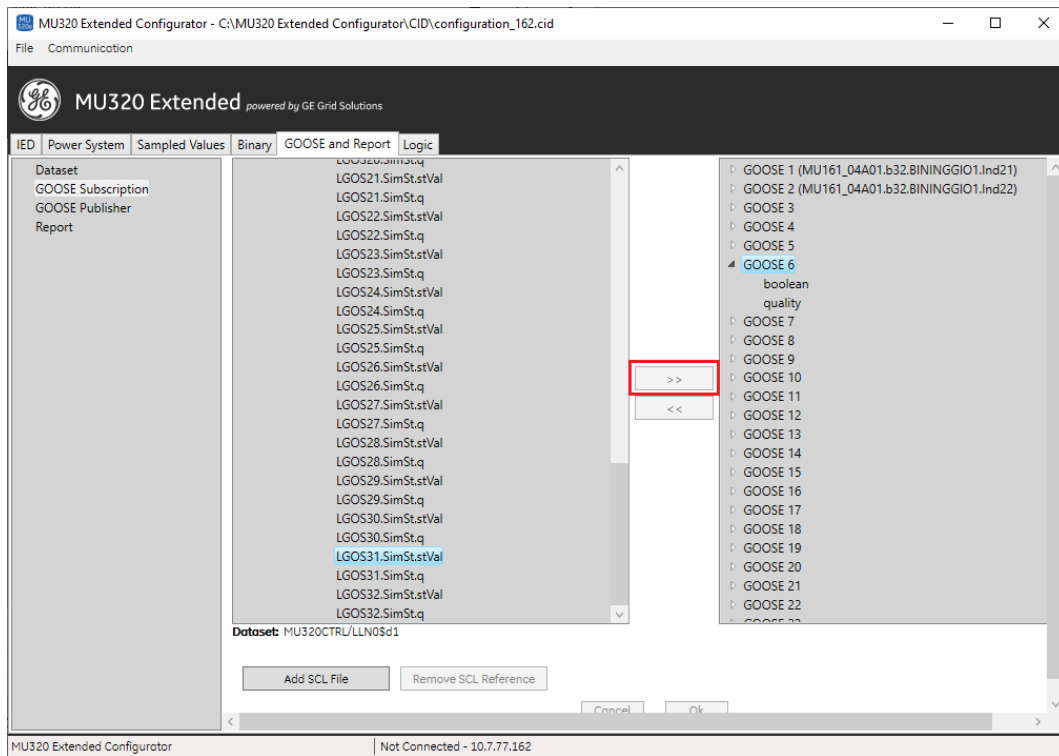
- GOOSE Publisher - Extend MAC Publisher Configuration
Changed the message about MAC address outside the range recommended by the IEC-61850 on the GOOSE Publisher. If user configures the MAC address outside of the recommended range by IEC-61850, a message asking the user whether to continue or not is displayed:



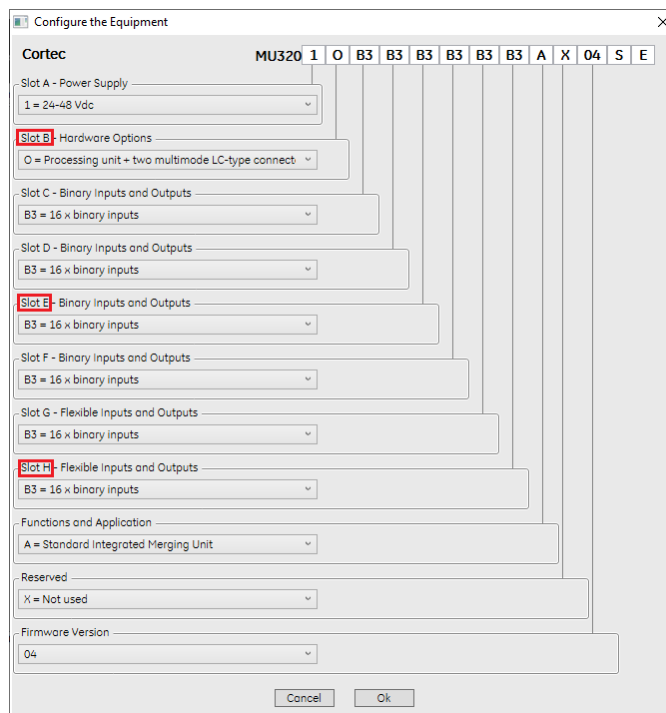
If “Yes”, the address is kept on the configuration; if “No”, the edition interface keeps opened to user to change.

- ICT does not allow subscribe any Boolean beyond 32 in a published dataset.





- Added the Slot identification in the "New" window options.



- PTP Monitoring
User will no longer see the information on PTP Monitoring view if the IED is on free running synchronization state (NOK).
- SV Configuration
Removed the "Unicast" option into Sample Values configuration. The "Message Type" field is disabled.



MU01 -> Protection

Enable

Message Name: MSVCB01

Description: Protection Sampled Value Stream

SV ID: IEDNameMU0101

Dataset: PhsMeas1

Message Type: Multicast

Sample Rate: 80 ppc Number of ASDUs: 1

- Added installer compatible with the MiCOM S1 Agile. Installer to be integrated on the MiCOM S1 Agile package.
- Added option to double click to edit Datasets and Control Blocks.
- Changed the Binary Inputs default voltage to 125 V when a new configuration is created.
- Simplified the PTP settings
User will no longer see the P2P Default profile and will be able to choose the Power or Custom profile. Also, user will no longer see the “Operation Mode” and “Grandmaster Priority” fields. For these fields the default values are “Two-step” and 255, respectively. Changed the Power profile nomenclature.

Time Source: PTP

Profile: Power (IEEE C37.238-2011)

Domain Number: 0

Network Protocol: Ethernet Level 2 VLAN

Delay Mechanism: Peer-to-peer

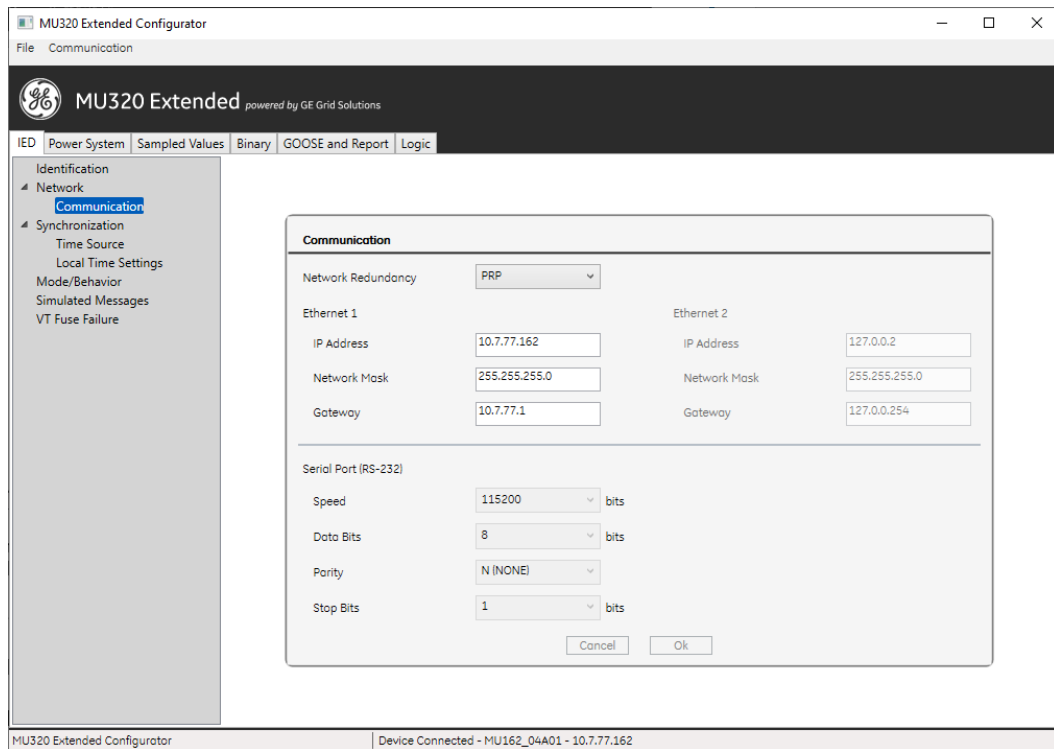
Announce Receipt Timeout: 3 s

Cancel Ok

Notable defect fixes

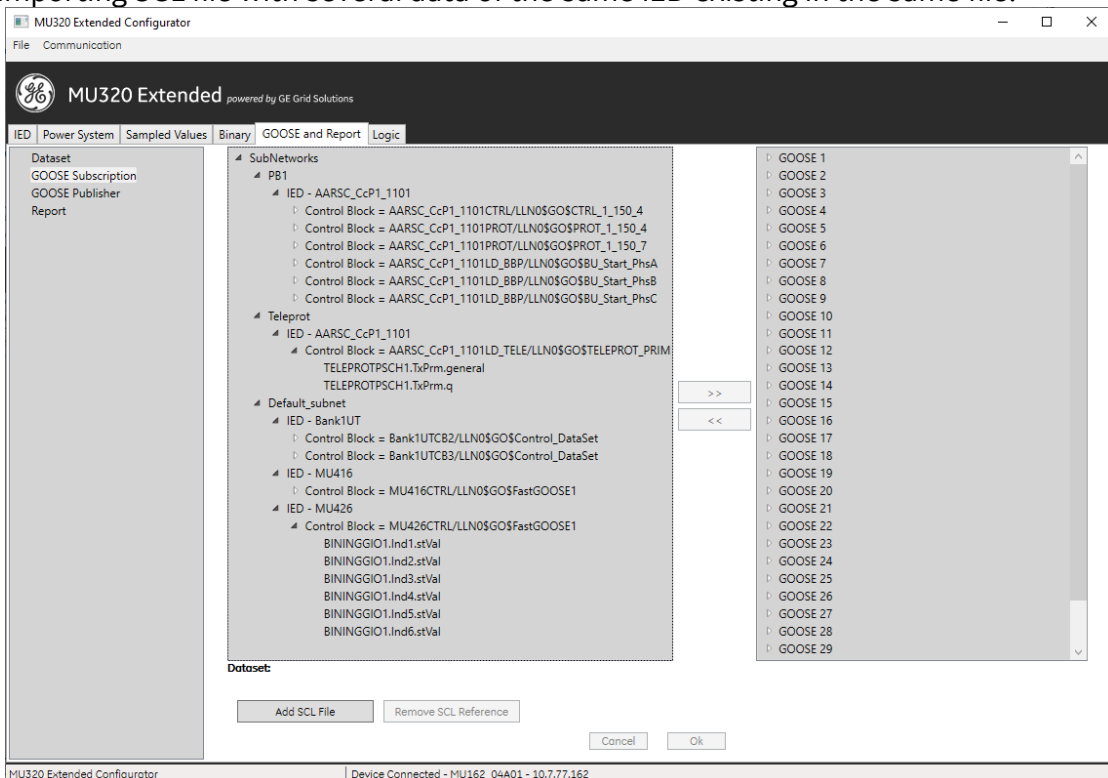
- Fixed Ethernet validation on PRP mode when configuring two network interfaces on the same subnetwork.
When user configures PRP mode and keeps the two interfaces on the same subnet, ICT changes the Ethernet 2 configuration to the default values:
 - IP Address: 127.0.0.2
 - Network Mask: 255.255.255.0
 - Gateway: 127.0.0.254





For communication without redundancy, the ICT will not allow user configures the IP address starting with "127" for Ethernet 1 and 2.

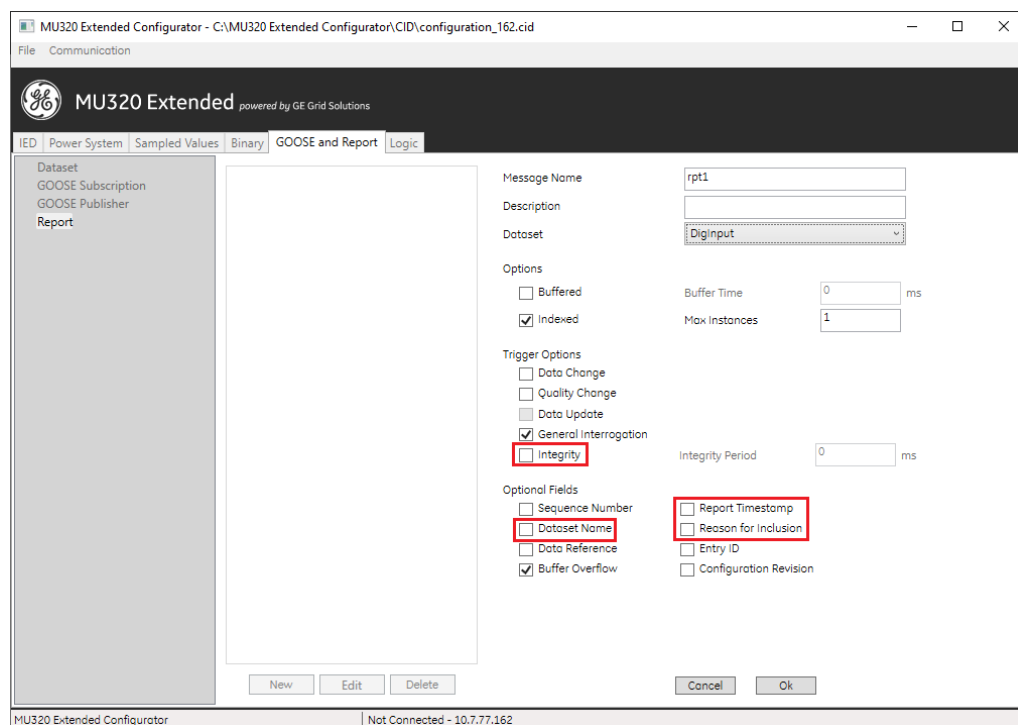
- Fixed importing SCL file with several data of the same IED existing in the same file.



- Fixed translations and interface adjustments on Time Source. Fixed the "Device Connected" label in status bar when language is changed. Adjusted the "Priority" field in the Portuguese language.
- Fixed the "swRev" info in configuration file to save firmware version instead of ICT version.



- Fixed mechanism to ask to save the configuration when closing the window if the user has only changed "Mod / Behavior" or "Simulated Messages" or "VT Fuse Failure" or "Report" or "Logic" data.
- Fixed some Portuguese translation texts.
- Fixed the word 'Electric' on the Identification interface.
- Replaced "Sistema de Potência Elétrico" by "Sistema Elétrico de Potência" in Portuguese language.
- Changed the default IED Name from "IEDName" to "MU320".
- Changed label "SMV ID" to "SV ID".
- Nomenclatures changed in the Reports window according to the IEC 61850-8-1 standard.



- Changed "VT Failure" to "VT Fuse Failure".
- Fixed serial communication process in two situations: wrong port and lost connection.
- Start, Status and Cortec windows layout fixed to show vertical scrollbar when scale is greater than 100%.
- Fixed AND label size on Logic tab: the "D" of "AND" was a little hidden.

Firmware compatibility

- MU320 firmware versions 04AXX.



Upgrade procedure

- If there already is a MU320 Extended Configurator installed, it must be removed before installation of the new version.
- Upgrading to MU320 Extended Configurator can be done by executing “bin\setup.exe”, after extracting the “MU320E-configurator.install-4.1.0.zip” file.

For questions or further product support, please contact the GE support team using:

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